

Zedira publication in JAFc:

Microbial transglutaminase treatment in pasta-production does not affect the immunoreactivity of gliadin with celiac disease patient's sera

Public discussion suggests potential impact of microbial transglutaminase (MTG)-treated food on celiac disease patients. Publications deduce that MTG in foodstuff could elicit the immune response of celiac patients based on preliminary data and in part by mixing up human tissue transglutaminase, known to trigger celiac disease, with the microbial enzyme. Accordingly, there is the need for in-depth investigation in order to provide substantial scientific data to this discussion. In the current publication, Zedira – in cooperation with Japanese AJINOMOTO Company – investigated the effect of MTG-treatment of pasta-dough on immunoreactivity of extracted gliadins using celiac patients' sera. Immunoblotting and ELISA did not indicate any difference in immunoreactivity of gliadins extracted from pasta and MTG-treated pasta. Recognition pattern and intensity in western blot as well as antibody titer in ELISA has been identical even for sera with a high anti-deamidated gliadin antibody titer. These results indicate no difference between pasta-gliadin and MTG-pasta-gliadin and especially no increased deamidation in pasta-gliadin by MTG-treatment. Further examinations on this topic are on-going.

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“Microbial transglutaminase treatment in pasta-production does not affect the immunoreactivity of gliadin with celiac disease patient's sera.”

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